

Appendix 7-7: Status of Everglades Forever Act Requirements

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INTRODUCTION

While many of the Everglades Forever Act (Act) requirements are directed toward control of nutrients entering the Everglades, there are also provisions that apply to mercury. Where provisions in the following excerpts from the Act apply to mercury, a superscript, uppercase letter has been added. Under that same letter, in the Implementation Section that follows, there is a description of the status of efforts with respect to that provision.

EXCERPTS FROM THE EVERGLADES FOREVER ACT

373.4592 Everglades improvement and management.--

(4) EVERGLADES PROGRAM.--

(d) Everglades research and monitoring program.--

1. By January 1996, the department and the district shall review and evaluate available water quality data for the Everglades Protection Area and tributary waters and identify any additional information necessary to adequately describe water quality in the Everglades Protection Area and tributary waters^A. By such date, the department and the district shall also initiate a research and monitoring program to generate such additional information identified and to evaluate the effectiveness of the BMPs and STAs, as they are implemented, in improving water quality and maintaining designated and existing beneficial uses of the Everglades Protection Area and tributary waters^B. As part of the program, the district shall monitor all discharges into the Everglades Protection Area for purposes of determining compliance with state water quality standards^C.
2. The research and monitoring program shall evaluate the ecological and hydrological needs of the Everglades Protection Area, including the minimum flows and levels. Consistent with such needs, the program shall also evaluate water quality standards for the Everglades Protection Area^D and for the canals of the EAA, so that these canals can be classified in the manner set forth in paragraph (e) and protected as an integral part of the water management system which includes the STAs of the

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Everglades Construction Project and allows landowners in the EAA to achieve applicable water quality standards compliance by BMPs and STA treatment to the extent this treatment is available and effective.

3. The research and monitoring program shall include research seeking to optimize the design and operation of the STAs^E, including research to reduce outflow concentrations, and to identify other treatment and management methods and regulatory programs that are superior to STAs in achieving the intent and purposes of this section.
4. The research and monitoring program shall be conducted to allow completion by December 2001 of any research necessary to allow the department to propose a phosphorus criterion in the Everglades Protection Area, and to evaluate existing state water quality standards applicable to the Everglades Protection Area and existing state water quality standards^F and classifications applicable to the EAA canals. In developing the phosphorus criterion, the department shall also consider the minimum flows and levels for the Everglades Protection Area and the district's water supply plans for the Lower East Coast.
5. The district, in cooperation with the department, shall prepare a peer-reviewed interim report regarding the research and monitoring program,^G which shall be submitted no later than January 1, 1999, to the Governor, the President of the Senate, and the Speaker of the House of Representatives for their review. The interim report shall summarize all data and findings available as of July 1, 1998, on the effectiveness of STAs and BMPs in improving water quality. The interim report shall also include a summary of the then-available data and findings related to the following: the Lower East Coast Water Supply Plan of the district, the United States Environmental Protection Agency Everglades Mercury Study, the United States Army Corps of Engineers South Florida Ecosystem Restoration Study, the results of research and monitoring of water quality and quantity in the Everglades region, the degree of phosphorus discharge reductions achieved by BMPs and agricultural operations in the region, the current information on the ecological and hydrological needs of the Everglades, and the costs and benefits of phosphorus reduction alternatives. Prior to finalizing the interim report, the district shall conduct at least one scientific workshop and two public hearings on its proposed interim report. One public hearing must be held in Palm Beach County and the other must be held in either Dade or Broward County. The interim report shall be used by the department and the district in making any decisions regarding the implementation of the Everglades Construction Project subsequent to the completion of the interim report. The construction of STAs 3/4 shall not be commenced until 90 days after the interim report has been submitted to the Governor and the Legislature.
6. Beginning January 1, 2000, the district and the department shall annually issue a peer-reviewed report regarding the research and monitoring program that summarizes all data and findings. The department shall provide copies of the report to the Governor, the President of the Senate, and the Speaker of the House of Representatives. The report shall identify water quality parameters, in addition to

phosphorus, which exceed state water quality standards or are causing or contributing to adverse impacts in the Everglades Protection Area.^H

7. The district shall continue research seeking to optimize the design and operation of STAs and to identify other treatment and management methods that are superior to STAs in achieving optimum water quality and water quantity for the benefit of the Everglades.^I The district shall optimize the design and operation of the STAs described in the Everglades Construction Project prior to expanding their size. Additional methods to achieve compliance with water quality standards shall not be limited to more intensive management of the STAs.

(e) Evaluation of water quality standards.--

1. The department and the district shall employ all means practicable to complete by December 31, 1998, any additional research necessary to:
 - a. Numerically interpret for phosphorus the Class III narrative nutrient criterion necessary to meet water quality standards in the Everglades Protection Area; and
 - b. Evaluate existing water quality standards applicable to the Everglades Protection Area and EAA canals. This research shall be completed no later than December 31, 2001^J.
2. By December 31, 2001, the department shall file a notice of rulemaking in the Florida Administrative Weekly to establish a phosphorus criterion in the Everglades Protection Area. In no case shall such phosphorus criterion allow waters in the Everglades Protection Area to be altered so as to cause an imbalance in the natural populations of aquatic flora or fauna. The phosphorus criterion shall be 10 parts per billion (ppb) in the Everglades Protection Area in the event the department does not adopt by rule such criterion by December 31, 2003. However, in the event the department fails to adopt a phosphorus criterion on or before December 31, 2002, any person whose substantial interests would be affected by the rulemaking shall have the right, on or before February 28, 2003, to petition for a writ of mandamus to compel the department to adopt by rule such criterion. Venue for the mandamus action must be Leon County. The court may stay implementation of the 10 parts per billion (ppb) criterion during the pendency of the mandamus proceeding upon a demonstration by the petitioner of irreparable harm in the absence of such relief. The department's phosphorus criterion, whenever adopted, shall supersede the 10 parts per billion (ppb) criterion otherwise established by this section, but shall not be lower than the natural conditions of the Everglades Protection Area and shall take into account spatial and temporal variability.
3. The department shall use the best available information to define relationships between waters discharged to, and the resulting water quality in, the Everglades Protection Area. The department or the district shall use these relationships to

- establish discharge limits in permits for discharges into the EAA canals and the Everglades Protection Area necessary to prevent an imbalance in the natural populations of aquatic flora or fauna in the Everglades Protection Area, and to provide a net improvement in the areas already impacted^K. Compliance with the phosphorus criterion shall be based upon a long-term geometric mean of concentration levels to be measured at sampling stations recognized from the research to be reasonably representative of receiving waters in the Everglades Protection Area, and so located so as to assure that the Everglades Protection Area is not altered so as to cause an imbalance in natural populations of aquatic flora and fauna and to assure a net improvement in the areas already impacted. For the Everglades National Park and the Arthur R. Marshall Loxahatchee National Wildlife Refuge, the method for measuring compliance with the phosphorus criterion shall be in a manner consistent with Appendices A and B, respectively, of the settlement agreement dated July 26, 1991, entered in case No. 88-1886-Civ-Hoeveler, United States District Court for the Southern District of Florida, that recognizes and provides for incorporation of relevant research.
4. The department's evaluation of any other water quality standards must include the department's antidegradation standards^L and EAA canal classifications. In recognition of the special nature of the conveyance canals of the EAA, as a component of the classification process, the department is directed to formally recognize by rulemaking existing actual beneficial uses of the conveyance canals in the EAA. This shall include recognition of the Class III designated uses of recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife, the integrated water management purposes for which the Central and Southern Florida Flood Control Project was constructed, flood control, conveyance of water to and from Lake Okeechobee for urban and agricultural water supply, Everglades hydroperiod restoration, conveyance of water to the STAs, and navigation.

STATUS OF IMPLEMENTATION

- A. By January 1996, the department and the district shall review and evaluate available water quality data for the Everglades Protection Area and tributary waters and identify any additional information necessary to adequately describe water quality in the Everglades Protection Area and tributary waters. *As described in the 1999 Interim Report and the 2000 Everglades Consolidated Report, this directive has been carried out. As described in Appendix 7-4 of this chapter, work is underway to obtain the additional information.*
- B. By such date, the department and the district shall also initiate a research and monitoring program to generate such additional information identified and to evaluate the effectiveness of the BMPs and STAs, as they are implemented, in improving water quality and maintaining designated and existing beneficial uses of the Everglades Protection Area and tributary waters. *As described in the 1999 Interim Report and the 2000 Everglades Consolidated Report, the district in cooperation with the department extensively studied the effects of the ENR, a prototype STA, on mercury and found that no mercury problem was created within the ENR and the mercury problem downstream in the Everglades was not exacerbated.*

- C. As part of the program, the district shall monitor all discharges into the Everglades Protection Area for purposes of determining compliance with state water quality standards. *This program is a condition of Everglades Forever Act and non-Act permits issued by the department to the district. Monitoring results are reported in Appendix 7-9 of this chapter.*
- D. Consistent with such needs, the program shall also evaluate water quality standards for the Everglades Protection Area and for the canals of the EAA, so that these canals can be classified in the manner set forth in paragraph (e) and protected as an integral part of the water management system which includes the STAs of the Everglades Construction Project and allows landowners in the EAA to achieve applicable water quality standards compliance by BMPs and STA treatment to the extent this treatment is available and effective. *The Department is evaluating the water quality standard for mercury in the Everglades Protection Areas, a subject that is extensively discussed in this Chapter.*
- E. The research and monitoring program shall include research seeking to optimize the design and operation of the STAs, including research to reduce outflow concentrations, and to identify other treatment and management methods and regulatory programs that are superior to STAs in achieving the intent and purposes of this section. *The district evaluation of the effects of Advanced Treatment on mercury is given in Appendix 7-10 of this chapter.*
- F. The research and monitoring program shall be conducted to allow completion by December 2001 of any research necessary to allow the department to propose a phosphorus criterion in the Everglades Protection Area, and to evaluate existing state water quality standards applicable to the Everglades Protection Area and existing state water quality standards^F and classifications applicable to the EAA canals. *With respect to mercury, completion of research and monitoring by this deadline is contingent upon the success of very complex research and upon sufficient funding, both of which are unpredictable. We are doing our best to meet this deadline for the mercury water quality standard.*
- G. The district, in cooperation with the department, shall prepare a peer-reviewed interim report regarding the research and monitoring program, which shall be submitted no later than January 1, 1999, to the Governor, the President of the Senate, and the Speaker of the House of Representatives for their review. *This requirement has been completed.*
- H. The report shall identify water quality parameters, in addition to phosphorus, which exceed state water quality standards or are causing or contributing to adverse impacts in the Everglades Protection Area. *This requirement has been completed.*
- I. The district shall continue research seeking to optimize the design and operation of STAs and to identify other treatment and management methods that are superior to STAs in achieving optimum water quality and water quantity for the benefit of the Everglades. The district shall optimize the design and operation of the STAs described in the Everglades Construction Project prior to expanding their size. *STA Monitoring and Everglades research have shown the importance of hydroperiod management to methylmercury uptake by fish – drying enhances uptake.*

- J. Evaluate existing water quality standards applicable to the Everglades Protection Area and EAA canals. This research shall be completed no later than December 31, 2001. *This requirement has been completed. The adequacy of the existing mercury standard is discussed extensively in this chapter.*
- K. The department or the district shall use these relationships to establish discharge limits in permits for discharges into the EAA canals and the Everglades Protection Area necessary to prevent an imbalance in the natural populations of aquatic flora or fauna in the Everglades Protection Area, and to provide a net improvement in the areas already impacted. *This chapter includes a discussion of the requirement for net improvement in the areas already impacted and of the department's reasons for believing that this provision will be met.*
- L. The department's evaluation of any other water quality standards must include the department's antidegradation standards and EAA canal classifications. *Work is in progress in evaluating a new standard for mercury that will include consideration of the antidegradation standards and EAA canal classifications.*